



The Post-Paris MRV Landscape

Where can CMS play?

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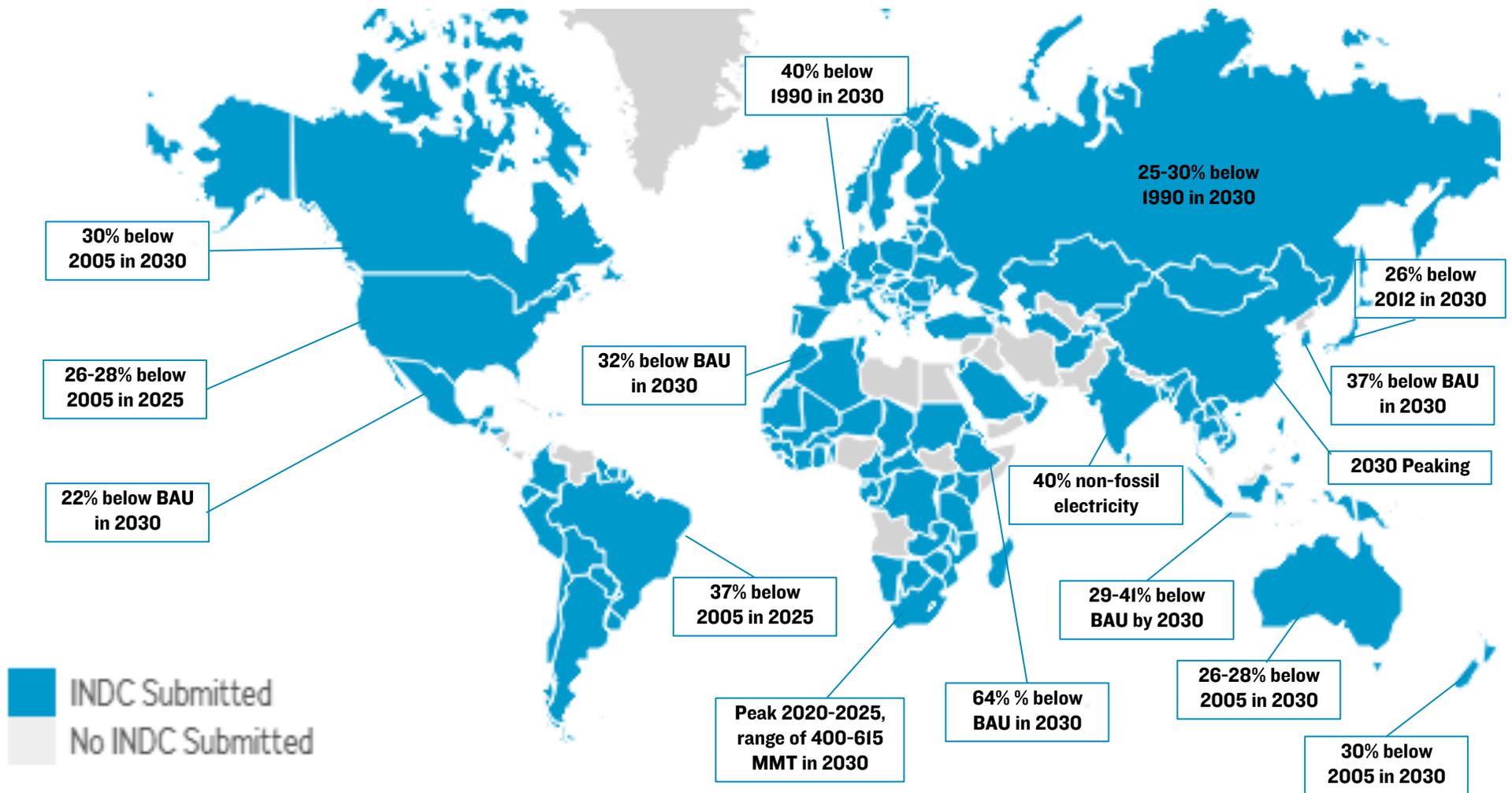
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Overview

- MRV of new “Nationally Determined Contributions”
- MRV Landscape Pre/Post-Paris
 - International
 - National
- Opportunities for CMS products

Wide range of countries with INDCs to date

Primarily economy-wide GHG reduction or CO₂ intensity targets

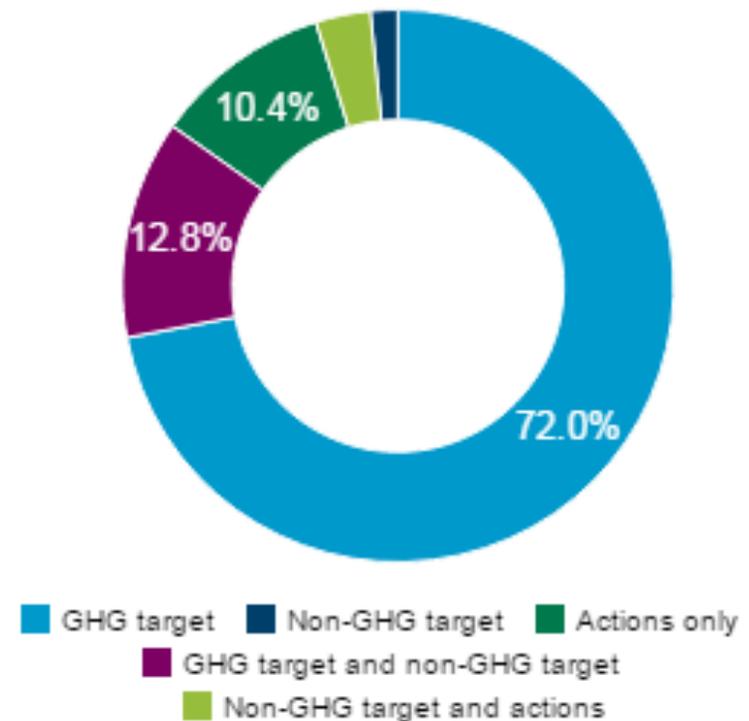


Many INDCs include mitigation “actions” for the forest sector

MRV needs will vary by country

- **Chile:** restoration of 100k ha of native forest (sequestration of ~600k tCO₂e) and reforestation of 100k ha (capture of 900k-1.2m tCO₂e) per year by 2030
- **China:** increase the forest stock volume by around 4.5 bn m³ above 2005 level.
- **Bhutan:** maintain minimum of 60% total land under forest cover with effort to maintain current levels (~70%)
- **Cambodia:** increase forest cover to 60% of national land area by 2030
- **Honduras:** afforestation/reforestation of 1m ha of forests by 2030.
- **India:** create additional carbon sink of 2.5-3 bn tCO₂ through additional forest cover by 2030
- **Vietnam:** increase forest cover to 45%

Types of Mitigation Commitment



International MRV regime post-Paris

No significant changes in form or methods from current system

Purpose:

- Track annual GHG emissions
- Demonstrate progress toward and achievement of NDC

Measurement:

- GHG inventories (anthropogenic, 6 gases, covering IPCC sector categories)
- Submitted 2 years after year of emissions

Reporting:

- All self-reported by national government
- GHG inventories and qualitative information on actions

Verification:

- Technical review by experts
- Peer review by other countries (Q&A, public discussion session at UN)

Timeframe:

- Every ~2 years for most countries (annual inventories for developed countries)

National MRV driven primarily by UNFCCC requirements

No significant changes in form or methods from current system

Purpose:

- Track GHG emissions
- Identify emission reduction opportunities and potential by sector/gas
- Inform establishment of INDC and policies to achieve it
- Track and demonstrate progress toward/achievement of NDC to domestic/international audiences
- Improve understanding of GHG measurement uncertainty and improved methods

Measurement:

- GHG inventories (bi/annual)
- Industry self-reporting

Timeframe:

- Annual/biennial GHG inventories
- Projections out to 2025/2030 and beyond (done every 2-5 years)
- Periodic updates to GHG inventory methods (varies by country)

Where CMS products can help inform/improve MRV

1. Independent, go-to source for sub/supranational data:

- Provide estimates of global non/anthropogenic GHG emissions/removals for CO₂ and CH₄ by source (+ uncertainty) on annual basis
- Independent estimates of land-cover changes (for MRV of NDCs), and/or provider of data to countries for self-reporting

Where CMS products can help inform/improve MRV

2. Validation:

- Provide independent measurements for specific sectors/gases in countries using inaccurate GHG inventory methods
 - Ex: *Many countries oil & gas methane emission estimates are flawed*
 - Ex: *“Official data from China revealed country is burning up to 17% more coal annually than previously reported.”*
- Aim: improve GHG inventories, help identify mitigation opportunities
- Scope: within national borders, by sector/gas, annual timescale (or able to extrapolate to annual)
- Audience: stakeholders looking to identify/optimize mitigation efforts (NGOs, UN agencies)

Where CMS products can help inform/improve MRV

3. Improve timeliness of GHG data:

- Provide more frequent/up-to-date estimates of GHG emissions
 - *Ex: many countries report only every 2-10 years, with a 2-4 year time lag*
- Aim: allow for independent assessment of recent (within 1 year) estimates of GHG emissions/removals
- Scope: within national borders, by sector/gas, annual timescale (or able to extrapolate to annual)
- Audience: could be used as backdrop for regular assessment of NDC progress, global emissions